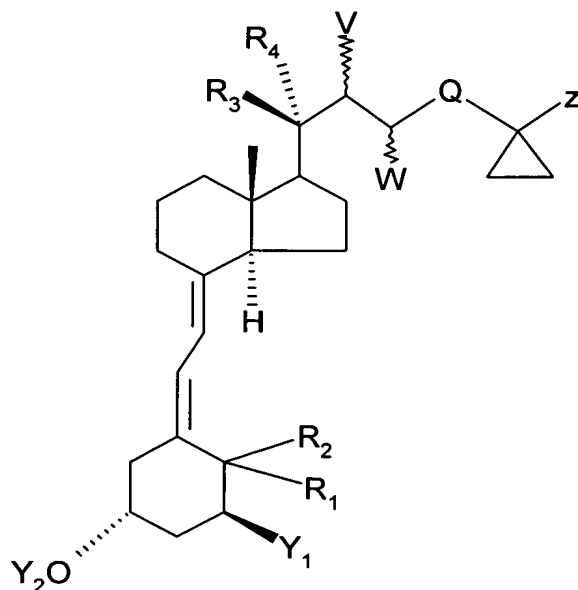


The following listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented): A vitamin D compound of formula I,



in which

Y_1 means a hydrogen atom, a hydroxyl group, a fluorine, chlorine or bromine atom or a group $-OCOR_8$, in which

R_8 is an aliphatic or aromatic radical with 1 to 12 C atoms,

Y_2 means a hydrogen atom or a group $-(CO)R_9$, in which

R_9 is an aliphatic or aromatic radical with 1 to 12 C atoms,

R_1 and R_2 are together an exocyclic methylene group,

R_3 and R_4 , independently of one another, mean a hydrogen atom or an alkyl group with 1 to 4 carbon atoms,

V and W together mean an E-double bond,

Q means a straight-chain or branched carbon unit with up to 10 carbon atoms, which at any position can have α - or β -hydroxyl groups, which in turn can be etherified or esterified, keto groups, amino groups or halogen atoms,

Z means a straight-chain or branched-chain, saturated or unsaturated hydrocarbon radical with up to 12 carbon atoms, which at any positions can have keto groups, α - or β -hydroxyl groups, which in turn can be etherified or esterified, amino groups, chlorine, or bromine atoms wherein Q is not -CHOH-.

2. (Previously Presented): A compound according to claim 1, wherein Q means an unsubstituted, unbranched alkylene unit with 1 or 2 carbon atoms, and Z means a straight-chain 1-oxoalkyl radical.

3. (Previously Presented): A compound according to claim 1, wherein Q means a -CH(OH)-CH₂-CH₂ radical, and Z means a straight-chain 1-oxoalkyl radical.

4. (Cancelled):

5. (Previously Presented): A compound selected from:

(5Z,7E,22E)-(1S,3R)-25-Acetyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopropyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxobutyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopentyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxohexyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxoheptyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxooctyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxononyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxodecyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-acetyl-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopropyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxobutyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopentyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxohexyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxoheptyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxooctyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxononyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxodecyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-25-acetyl-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-acetyl-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-

secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-acetyl-24-methoxy-26,27-cyclo-24a,24b-dihomo-9,10-
 secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-25-acetyl-24-methoxy-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-

9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,
 (5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-
 9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,
 (5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-
 9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,
 (5Z,7E,22E)-(1S,3R,24S)-25-methyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-methyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-propyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-propyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-pentyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-pentyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24S)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,
 (5Z,7E,22E)-(1S,3R,24R)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-
 tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-nonyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-nonyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-decyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-decyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-ethylene-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-ethylene-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-

5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,
[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-
5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

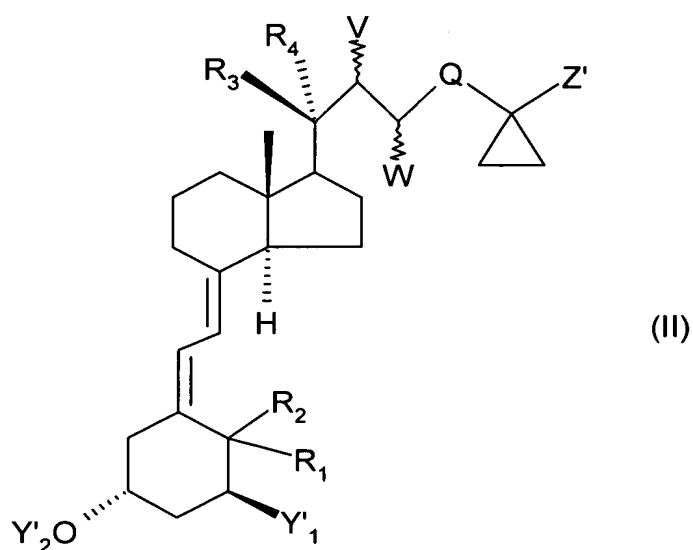
[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol, and

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol.

6. (Previously Presented): A process for the production of compounds according to claim 1, comprising:

converting a compound of formula II



in which

Y'_1 means a hydrogen atom, a halogen atom, or a protected hydroxyl group,

Y'_2 means a hydroxy protective group, and

Z' means a straight-chain or branched-chain, saturated or unsaturated hydrocarbon radical with up to 12 carbon atoms, which at any positions can have protected keto groups, protected α - or β -hydroxyl groups, which in turn can be etherified or esterified, amino groups, chlorine, or bromine atoms

into a compound of formula I by simultaneous or successive cleavage of the hydroxy and keto protective groups and optionally by partial or complete esterification of free hydroxyl groups.

7. (Cancelled):

8. (Cancelled):

9. (Cancelled):

10. (Cancelled):

11. (Cancelled):

12. (Cancelled):
13. (Cancelled);
14. (Previously Presented): A pharmaceutical composition comprising a compound according to claim 1 and a pharmaceutically acceptable carrier.
15. (Cancelled):
16. (Cancelled):
17. (Cancelled):
18. (Cancelled):
19. (Previously Presented): A vitamin D compound wherein said compound is:
(5Z, 7E, 22E)-(1S, 3R, 24S)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
(5Z, 7E, 22E)-(1S, 3R, 24R)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
[5Z, 7E, 22E, 25(Z)]-(1S, 3R, 24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
[5Z, 7E, 22E, 25(E)]-(1S, 3R, 24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
[5Z, 7E, 22E, 25(E)]-(1S, 3R, 24R)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
(5Z, 7E, 22E)-(1S, 3R, 24S)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
(5Z, 7E, 22E)-(1S, 3R, 24R)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,
(5Z, 7E, 22E)-(1S, 3R, 24S)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24R)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24S)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24R)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24S)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24S)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z, 7E, 22E)-(1S, 3R, 24R)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z, 7E, 22E, 25(Z)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol, or

[5Z, 7E, 22E, 25(Z)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol.

20. (Cancelled):

21. (Previously Presented): A compound according to claim 1, wherein R₃ is H and R₄ is methyl, R₃ is methyl and R₄ is H, or R₃ is methyl and R₄ is methyl.

22. (Previously Presented): A compound according to claim 1, wherein R₈ and R₉ are each independently methyl, ethyl, propyl, i-propyl, butyl or phenyl.

23. (Previously Presented): A compound according to claim 1, wherein Q is -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -(CH₂)₇-, -CH₂-C(CH₃)₂-CH₂-, -CH₂-CH(CH₃)-CH₂-CH(CH₃)-CH₂-, -CH₂-CH(OH)-, -CH₂-CH₂-CH(OH)-, -CH(OH)-CH₂-, -CH(OH)-CH₂-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH(OCH₃)-, -CH₂-CH(OC₂H₅)-, -CH₂-CH(OCOCH₃)-CH₂-CH(OCOCH₃)-CH₂-, -CH₂-CH(OCOC₄H₉)-CH₂-, -CO-CH₂-, -CO-CH₂-CH₂-, -CH₂COCH₂-, -CH(Cl)-, -CH(Cl)-CH₂-, -CH₂-CH(Cl)-, -CH(NH₂)-, -CH(NH₂)-CH₂-,

-CH(N(CH₃)₂)-, -CH(N(CH₃)₂)-CH₂-, -CH₂-CH(N(CH₃)₂)-CH₂-CH(N(CH₃)₂)-CH₂-,
-CH(F)-, -CH(F)-CH₂-, -CH₂-CH(F)-CH₂-.

24. (Previously Presented): A compound according to claim 1, wherein Q is an unsubstituted, unbranched alkylene with 1-3 carbon atoms, -CH(OH)-CH₂- or -CH(OH)-CH₂-CH₂-.

25. (Previously Presented): A compound according to claim 1, wherein Z is -CH₃, -CH₂-CH₃, -(CH₂)₂-CH₃, -(CH₂)₃-CH₃, -(CH₂)₄-CH₃, -(CH₂)₅-CH₃, -(CH₂)₆-CH₃, -(CH₂)₇-CH₃, -CH₂-C(CH₃)₂-CH₂-CH₃, -CH₂-CH(CH₃)-CH₂-CH(CH₃)-CH₂-CH₃, -CH(OH)-CH₃, -CH₂-CH(OH)-CH₃, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-CH₃, -CH(OCH₃)-CH₃, -CH₂-CH(OC₂H₅)-CH₃, -CH₂-CH(OCOCH₃)-CH₂-CH(OCOCH₃)-CH₂-CH₃, -CH₂-CH(OCOC₄H₉)-CH₂-CH₃, -CH₂COCH₂-CH₃, -CH₂-CH(Cl)-CH₃, -CH₂-CH(N(CH₃)₂)-CH₂-CH(N(CH₃)₂)-CH₂-CH₃, -CH₂-CH(F)-CH₂-CH₃.

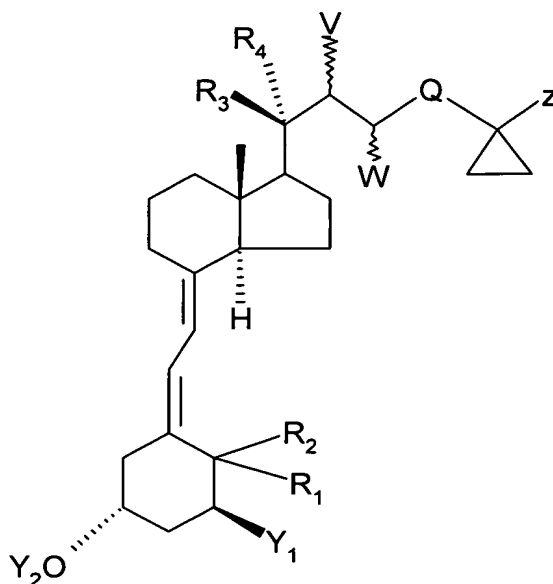
26. (Previously Presented): A compound according to claim 1, wherein Z is 1-oxoalkyl having 1-12 C atoms, alkyl having 1-12 C atoms or alkenyl having 1-12 C atoms.

27. (Cancelled):

28. (Previously Presented): A compound according to claim 26, wherein Z is 1-oxopropyl, 1-oxobutyl, 1-oxopentyl, 1-oxohexyl, 1-oxoheptyl, 1-oxooctyl, 1-oxononyl, 1-oxodecyl, acetyl, methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, 1-propenyl, 1-butenyl, 1-pentenyl, 1-hexeynyl, 1-heptenyl, 1-octenyl, 1-nonenyl, or 1-decenyl.

29. (Previously Presented): A method of preparing a pharmaceutical composition comprising combining a compound according to claim 1 with a pharmaceutically compatible vehicle.

30. (Previously Presented): A vitamin D compound of formula I,



in which

Y_1 means a hydrogen atom, a hydroxyl group, a fluorine, chlorine or bromine atom or a group $-OCOR_8$, in which

R_8 is an aliphatic or aromatic radical with 1 to 12 C atoms,

Y_2 means a hydrogen atom or a group $-(CO)R_9$, in which

R_9 is an aliphatic or aromatic radical with 1 to 12 C atoms,

R_1 and R_2 are together an exocyclic methylene group,

R_3 and R_4 , independently of one another, mean a hydrogen atom or an alkyl group with 1 to 4 carbon atoms,

V and W together mean an E-double bond,

Q means an unsubstituted, unbranched alkylene unit with 1 or 2 carbon atoms, and

Z means a straight-chain or branched-chain, saturated or unsaturated hydrocarbon radical with up to 12 carbon atoms, which at any positions can have keto groups, - or -hydroxyl groups, which in turn can be etherified or esterified, amino groups, chlorine, or bromine atoms.

31. (Previously Presented): A compound according to claim 1, wherein Z is $-CH_3$, $-CH_2-CH_3$, $-(CH_2)_2-CH_3$, $-(CH_2)_3-CH_3$, $-(CH_2)_4-CH_3$, $-(CH_2)_5-CH_3$, $-(CH_2)_6-CH_3$, $-(CH_2)_7-CH_3$, $-CH_2-C(CH_3)_2-CH_2-CH_3$, or $-CH_2-CH(CH_3)-CH_2-CH(CH_3)-CH_2-CH_3$.

32. (Previously Presented): A compound according to claim 1, wherein Z is -

CH(OH)-CH₃, -CH₂-CH(OH)-CH₃, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-CH₃, -CH₂-CH(OH)-CH₂-CH₃, or -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-CH₃.

33. (Previously Presented): A compound according to claim 1, wherein Z is -CH(OCH₃)-CH₃, -CH₂-CH(OC₂H₅)-CH₃, -CH₂-CH(OCOCH₃)-CH₂-CH(OCOCH₃)-CH₂-CH₃, or -CH₂-CH(OCOC₄H₉)-CH₂-CH₃.

34. (Previously Presented): A compound according to claim 1, wherein Z is -CH₂COCH₂-CH₃, -CH₂-CH(Cl)-CH₃, -CH₂-CH(N(CH₃)₂)-CH₂-CH(N(CH₃)₂)-CH₂-CH₃, or -CH₂-CH(F)-CH₂-CH₃.

35. (Previously Presented): A compound according to claim 1, wherein Z is a 1-oxoalkyl group with 1-12 carbon atoms, an alkyl group with 1-12 carbon atoms, or an alkenyl group with 1-12 carbon atoms, in which the double bond can have E- or Z-geometry and can be present at any position.

36. (Previously Presented): A compound according to claim 5, wherein said compound is

(5Z,7E,22E)-(1S,3R)-25-Acetyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopropyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxobutyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopentyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxohexyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxoheptyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxooctyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxononyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol, or

(5Z,7E,22E)-(1S,3R)-25-(1-oxodecyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol.

37. (Cancelled):

38. (Previously Presented): A compound according to claim 5, wherein said compound is

(5Z,7E,22E)-(1S,3R)-25-acetyl-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopropyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxobutyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxopentyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxohexyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxoheptyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxooctyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R)-25-(1-oxononyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol, or

(5Z,7E,22E)-(1S,3R)-25-(1-oxodecyl)-26,27-cyclo-24a-homo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol.

39. (Cancelled):

40. (Previously Presented): A compound according to claim 5, wherein said compound is

(5Z,7E,22E)-(1S,3R,24R)-25-acetyl-24-methoxy-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-25-acetyl-24-methoxy-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxopropyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxobutyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxopentyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxohexyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxoheptyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxooctyl)-26,27-cyclo-24a,24b-dihomo-

9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxononyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol,

(5Z,7E,22E)-(1S,3R,24R)-24-methoxy-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol, or

(5Z,7E,22E)-(1S,3R,24S)-24-methoxy-25-(1-oxodecyl)-26,27-cyclo-24a,24b-dihomo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3-diol.

41. (Previously Presented): A compound according to claim 5, wherein said compound is

(5Z,7E,22E)-(1S,3R,24S)-25-methyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-methyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-ethyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-propyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-propyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-butyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-pentyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-pentyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-hexyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-heptyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-octyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-nonyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-nonyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24S)-25-decyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol, or

(5Z,7E,22E)-(1S,3R,24R)-25-decyl-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol.

42. (Previously Presented): A compound according to claim 5, wherein said compound is

(5Z,7E,22E)-(1S,3R,24S)-25-ethylene-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

(5Z,7E,22E)-(1S,3R,24R)-25-ethylene-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-

tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24S)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(E)]-(1S,3R,24R)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-propenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-butenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-pentenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-hexenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-heptenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-octenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-nonenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol,

[5Z,7E,22E,25(Z)]-(1S,3R,24S)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol, or

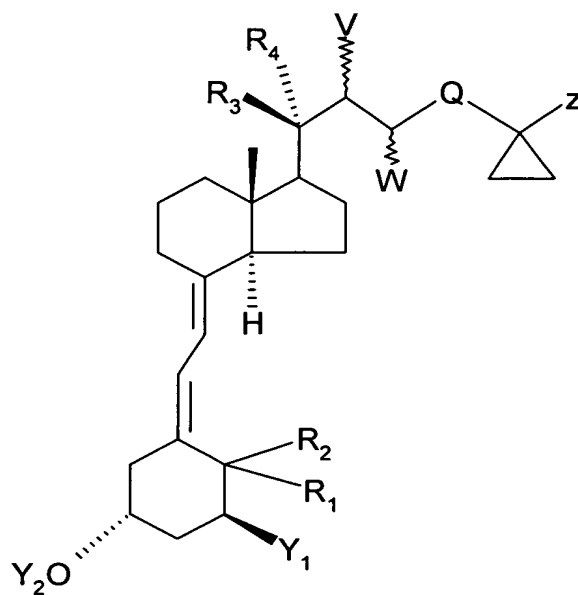
[5Z,7E,22E,25(Z)]-(1S,3R,24R)-25-(1-decenyl)-26,27-cyclo-9,10-secocholesta-5,7,10(19),22-tetraene-1,3,24-triol.

43. (Previously Presented): A compound according to claim 23, wherein Q is -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -(CH₂)₇-, -CH₂-C(CH₃)₂-CH₂-, -CH₂-CH(CH₃)-CH₂-CH(CH₃)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH(OCH₃)-, -CH₂-CH(OC₂H₅)-, -CH₂-CH(OCOCH₃)-CH₂-CH(OCOCH₃)-CH₂-, -CH₂-CH(OCOC₄H₉)-CH₂-, -CO-CH₂-, -CO-CH₂-CH₂-, -CH₂COCH₂-, -CH(Cl)-, -CH(Cl)-CH₂-, -CH₂-CH(Cl)-, -CH(NH₂)-, -CH(NH₂)-CH₂-, -CH(N(CH₃)₂)-, -CH(N(CH₃)₂)-CH₂-, -CH₂-CH(N(CH₃)₂)-CH₂-CH(N(CH₃)₂)-CH₂-, -CH(F)-, -CH(F)-CH₂-, -CH₂-CH(F)-CH₂-.

44. (Previously Presented): A compound according to claim 26, wherein Z is alkyl having 1-12 C atoms or alkenyl having 1-12 C atoms.

45. (Previously Presented): A compound according to claim 44, wherein Z is methyl, ethyl, propyl, butyl, pentyl, hexyl, heptyl, octyl, nonyl, decyl, 1-propenyl, 1-butenyl, 1-pentenyl, 1-hexeynyl, 1-heptenyl, 1-octenyl, 1-nonenyl, or 1-decenyl.

46. (Presently Presented): A vitamin D compound of formula I,



in which

Y_1 means a hydrogen atom, a hydroxyl group, a fluorine, chlorine or bromine atom or a group $-OCOR_8$, in which

R_8 is an aliphatic or aromatic radical with 1 to 12 C atoms,

Y_2 means a hydrogen atom or a group $-(CO)R_9$, in which

R_9 is an aliphatic or aromatic radical with 1 to 12 C atoms,

R_1 and R_2 are together an exocyclic methylene group,

R_3 and R_4 , independently of one another, mean a hydrogen atom or an alkyl group with 1 to 4 carbon atoms,

V and W together mean an E-double bond,

Q means a straight-chain or branched carbon unit with up to 10 carbon atoms, which at any position can have α - or β -hydroxyl groups, which in turn can be etherified or esterified, keto groups, amino groups or halogen atoms,

Z means a straight-chain or branched-chain, saturated or unsaturated hydrocarbon radical with up to 12 carbon atoms, which at any positions can

have keto groups, α - or β -hydroxyl groups, which in turn can be etherified or esterified, amino groups, chlorine, or bromine atoms

wherein Q is not either -CHOH- or -CHOH- in which the OH group is esterified.

47. (Previously Presented): A compound according to claim 46, wherein Q is -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -(CH₂)₇-, -CH₂-C(CH₃)₂-CH₂-, -CH₂-CH(CH₃)-CH₂-CH(CH₃)-CH₂-, -CH₂-CH(OH)-, -CH₂-CH₂-CH(OH)-, -CH(OH)-CH₂-, -CH(OH)-CH₂-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH(OCH₃)-, -CH₂-CH(OC₂H₅)-, -CO-CH₂-, -CO-CH₂-CH₂-, -CH₂COCH₂-, -CH(Cl)-, -CH(Cl)-CH₂-, -CH₂-CH(Cl)-, -CH(NH₂)-, -CH(NH₂)-CH₂-, -CH(N(CH₃)₂)-, -CH(N(CH₃)₂)-CH₂-, -CH₂-CH(N(CH₃)₂)-CH₂-, -CH(N(CH₃)₂)-CH₂-, -CH(F)-, -CH(F)-CH₂-, -CH₂-CH(F)-CH₂-.

48. (Previously Presented): A compound according to claim 47, wherein Q is -CH₂-, -(CH₂)₂-, -(CH₂)₃-, -(CH₂)₄-, -(CH₂)₇-, -CH₂-C(CH₃)₂-CH₂-, -CH₂-CH(CH₃)-CH₂-CH(CH₃)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-, -CH₂-CH(OH)-CH₂-CH(OH)-CH₂-, -CH(OCH₃)-, -CH₂-CH(OC₂H₅)-, -CO-CH₂-, -CO-CH₂-CH₂-, -CH₂COCH₂-, -CH(Cl)-, -CH(Cl)-CH₂-, -CH₂-CH(Cl)-, -CH(NH₂)-, -CH(NH₂)-CH₂-, -CH(N(CH₃)₂)-, -CH(N(CH₃)₂)-CH₂-, -CH₂-CH(N(CH₃)₂)-CH₂-CH(N(CH₃)₂)-CH₂-, -CH(F)-, -CH(F)-CH₂-, -CH₂-CH(F)-CH₂-.

49. (Cancelled):

50. (Cancelled):